California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Acting Secretary for Environmental Protection

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Edmund G. Brown Jr.
Governor

NOTICE OF OPPORTUNITY TO COMMENT

DRAFT CLEANUP AND ABATEMENT ORDER

PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
SAN BERNARDINO COUNTY

NOTICE IS HEREBY GIVEN THAT the California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) will accept comments on a draft Cleanup and Abatement Order (Order). Written comments **must be received by 3:00 p.m. on Friday, July 1, 2011** and addressed to:

Harold Singer, Executive Officer
California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

Comment letters (if less than 10 total pages, no color copies, pages must be 8½ x 11 inches in size and total size must be less than 10 megabytes) may be submitted via email at: hsinger@waterboards.ca.gov or by facsimile at (530) 544-2271.

BACKGROUND

The Lahontan Water Board Prosecution Team prepared a draft Cleanup and Abatement Order that, if adopted, would require Pacific Gas and Electric Company to provide whole-house replacement water to affected parties. The Order establishes criteria to identify affected parties and establishes a schedule for Pacific Gas and Electric Company to provide replacement water.

AVAILABILITY OF DOCUMENTS

A copy of the draft Order is enclosed with this notice. The draft order is also available on the Lahontan Water Board web site at:
http://www.waterboards.ca.gov/lahontan/water_issues/projects/pge/index.shtml

For information regarding future notices on this or any other aspect of the Pacific Gas and Electric Company, Hinkley Chromium Cleanup project, please sign up for the "Pacific Gas & Electric Company, Hinkley Chromium Cleanup" electronic mailing list at the Lyris List website:
http://www.waterboards.ca.gov/resources/email_subscriptions/reg6_subscribe.shtml

SUBMISSION OF WRITTEN COMMENTS

The Lahontan Water Board is interested in receiving comments regarding all aspects of the draft Order. Specifically, comments are being solicited on:

1. The rational for requiring whole-house replacement water.
2. The criteria for defining the parties to whom Pacific Gas and Electric Company would be required to provide whole-house replacement water.
3. The schedule by which Pacific Gas and Electric Company would be required to comply with the Order.

NEXT STEPS

Pursuant to the authority delegated to him by the Lahontan Regional Water Quality Control Board, including the power to issue Cleanup and Abatement Orders, the Lahontan Water Board Executive Officer will review the written comments received on the draft Order. He may allow the Lahontan Water Board Prosecution Team and/or Pacific Gas and Electric Company to provide rebuttal comments in response to the written comments received as a result of this Notice. Based upon his review of the written record, if he determines that there is sufficient rational to support the issuance of an order for whole-house replacement water, he may issue the Order as proposed by the Lahontan Water Board Prosecution Team or with changes made in response to the written comments received. If he finds it necessary, an oral hearing may be held to allow the parties to provide responses to the written comments received in response to this Notice. However, no new comments on the draft Order will be allowed at such a hearing.

QUESTIONS

Please direct procedural questions to either Harold Singer, Executive Officer at (530) 542-5412 or hsinger@waterboards.ca.gov or Kimberly Niemeyer, Staff Counsel at (916) 341-5547 or kniemeyer@waterboards.ca.gov. Questions on the draft order should be directed to the Lahontan Water Board Prosecution Team – Lisa Dernbach at (530) 542-5424 or ldernbach@waterboards.ca.gov (for technical questions) or Reed Sato at (916) 341-5889 or rsato@waterboards.ca.gov (for legal questions).

June 10, 2011
Dated

Harold J. Singer
Executive Officer

Enclosure: Draft Cleanup and Abatement Order No. R6V-2011-0005A1 (June 10, 2011)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

JUNE 10, 2011 DRAFT FOR PUBLIC REVIEW AND COMMENT

AMENDED CLEANUP AND ABATEMENT ORDER NO. R6V-2011-0005A1
WDID NO. 6B369107001
REQUIRING PACIFIC GAS AND ELECTRIC COMPANY TO CLEAN UP AND ABATE WASTE DISCHARGES OF TOTAL AND HEXAVALENT CHROMIUM TO THE GROUNDWATERS OF THE MOJAVE HYDROLOGIC UNIT

San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Water Board), finds:

1. The Pacific Gas and Electric Company (PG&E) owns and operates the Hinkley Compressor Station (hereafter the "Facility") located southeast of the community of Hinkley in San Bernardino County. For the purposes of this Order, PG&E is referred to as the "Discharger."

Site History and Hydrogeology

2. The Facility is located at 35863 Fairview Road (APN 048S-112-52), one-half mile east of the community of Hinkley in San Bernardino County, in the Harper Valley Subarea of the Mojave Hydrologic Unit. The Facility began operating in 1952 and discharged untreated cooling tower water containing hexavalent chromium (Cr(VI)) to unlined ponds until 1964. Wastewater then percolated through soil to the water table, approximately 80 feet below, creating a chromium plume. In general, the chromium plume extends north from the compressor station to at least Thompson Road and from east of Summerset Road to west of Mountain View Road.

3. The hydrogeology in the southern 75 percent and in the northeastern portion of the project area consists of an upper, unconfined aquifer and a lower, confined aquifer separated by a lacustrine clay that forms a regional aquitard. The hydrogeology in the northwestern portion of the project area consists of just the upper, unconfined aquifer, as the lower aquifer and clay aquitard pinch out (terminate against the upward sloping bedrock). In general, groundwater flow is primarily to the north-northwest towards the Harper Dry Lake, with an average gradient of 0.004 feet per foot. The Mojave River contributes more than 80 percent of the natural groundwater recharge to the Hinkley Valley.

   The groundwater in the upper aquifer below the Facility contains hexavalent chromium from the PG&E compressor station plume and naturally occurring constituents. Chromium concentrations in groundwater are highest at the compressor station and become less concentrated towards the north. According to the *First Quarter 2011 Groundwater Monitoring Report*, the highest level of hexavalent chromium detected in groundwater was 7,280 micrograms per liter

(µg/L) at monitoring well SA-MW-05D. Because this detected value exceeds 5,000 µg/L, it puts hexavalent chromium in the area of SA-MW-05D into the hazardous waste category. The plume contains total chromium greater than the state MCL value of 50 µg/L from the Facility to Santa Fe Avenue, almost two miles north. For at least the next mile north, hexavalent and total chromium concentrations reside at concentrations of less than 50 µg/L The discharger's hexavalent chromium plume is the only known source of anthropogenic or human introduced chromium in the upper aquifer.

4. The soils underlying the Facility are comprised of interbedded sands, gravels, silts, and clays. The depth to bedrock ranges from about 300 feet below ground surface in the southern project area to cropping out (bedrock comes to the ground surface) in the northern portion of the project area. The chromium plume resides primarily in floodplain sediments originating from the Mojave River and alluvial sediments eroded from local mountains. The closest surface water is an unnamed ephemeral stream, located about 4,000 feet northwest of the plume's northern boundary. In addition, the Mojave River is located less than one mile to the southeast of the Facility.

Plume Migration

5. Hexavalent and total chromium occur naturally in groundwater at variable concentrations, according to the February 27, 2007, document, *Groundwater Background Chromium Study Report, Hinkley Compressor Station*. The mean (or average) background concentrations detected in groundwater are 1.19 for hexavalent chromium and 1.52 µg/L for total chromium. The work plan for the Study recommended that maximum background concentrations should be expressed as the 95% upper tolerance limits. The 95% upper tolerance limit is the value that is estimated to include 95 percent of the population with a 95 percent confidence level. The 95% upper tolerance limits are 3.09 µg/L for hexavalent chromium and 3.23 µg/L for total chromium.

6. Recent testing of the Hinkley wells has shown increasing levels of hexavalent chromium in domestic water. On July 28, 2010, Water Board staff received information from PG&E that hexavalent and total chromium concentrations exceeded 3.1 µg/L at three residential wells and four shallow monitoring wells along Summerset Road, and to the east of Summerset Road, north of Santa Fe Avenue. Three of these wells contained hexavalent chromium ranging from 4 µg/L to 5.5 µg/L.

7. Testing results from the First Quarter 2011 provided an approximate concentration contour, or outline of hexavalent chromium levels above 3.1 µg/L and total chromium above 3.2 µg/L based on chromium results from the upper aquifer groundwater monitoring wells and short-screen extraction wells. This document showed significant expansion of the chromium plume to the north past Thompson Road, to the west toward Serra Road, and to the east past Summerset Road toward Dixie Road. These data indicate that the chromium

plume had migrated to locations where the hexavalent chromium levels had previously been below 3.1 µg/L, according to previously submitted data.

8. There is no indication that the rising chromium levels are a result of fluctuation in the naturally occurring constituents. The rise in chromium levels indicates that the anthropogenic hexavalent chromium plume resulting from the discharge of chromium at the Discharger's compressor station is migrating to new areas in the upper aquifer.

Regulatory History

9. On August 6, 2008, the Water Board issued Cleanup and Abatement Order (CAO) No. R6V-2008-0002 to the Discharger to clean up and abate the effects of waste discharges and threatened discharges containing hexavalent chromium and total chromium to waters of the State. The CAO, in part, required the Discharger to prevent the chromium plume from migrating to locations where hexavalent chromium is below the background levels.

10. At the November 12-13, 2008 Water Board meeting, the Water Board considered the 2007 *Background Chromium Study*, along with comments and recommendations by interested persons and staff.

11. Following the meeting, the Water Board Executive Officer issued Amended CAO No. R6V-2008-0002A1 (2008 Amended CAO) to establish background concentrations for chromium in Hinkley Valley groundwater as follows:

    Maximum background hexavalent chromium = 3.1 µg/L
    Maximum background total chromium = 3.2 µg/L
    Average background hexavalent chromium = 1.2 µg/L
    Average background total chromium = 1.5 µg/L

12. The 2007 *Background Chromium Study* described in Finding 11 and Amended CAO No. R6V-2008-0002A1 determining levels of naturally occurring chromium in the Hinkley Valley have not gone through a final scientific review to determine their accuracy. The study is currently undergoing peer-review through Cal/EPA's scientific peer review program. Depending on the results of the peer review, the Water Board may modify the maximum background or average background hexavalent chromium and total chromium. These background concentrations were set to provide information to the Water Board for the purposes of evaluating and eventually setting clean up requirements and not for establishing interim or permanent replacement drinking water. For purposes of replacement drinking water, other data such as historic sampling information and concentration trends, may be used to determine if a well has been affected.

13. On May 5, 2010, Water Board staff issued a letter to the Discharger that stated in part, rising chromium concentrations in sentry monitoring well MW-62A beginning in November 2008 indicated unauthorized expansion of the plume. The Discharger was directed to return the site to compliance with Cleanup and Abatement Order (CAO) No. R6V-2008-0002 and its amendment, CAO No. R6V-2008-0002A1. The

Discharger has since installed at least 80 additional monitoring wells to evaluate the extent of plume expansion. Additionally, the Discharger has implemented an Action Plan by increasing groundwater extraction to capture the migrating plume.

14. On January 7, 2011, the Water Board issued Cleanup and Abatement Order R6V-2011-0005 to PG&E in response to the rising levels of hexavalent chromium detected in Hinkley domestic wells. This order required that PG&E provide interim uninterrupted replacement water, such as bottled water, to residences and businesses in which hexavalent chromium had been detected at concentrations exceeding 3.1 µg/L, or total chromium had been detected at 3.2 µg/L. This decision was based on 1) the 2010 testing results that showed concentrations of hexavalent chromium exceeded background levels, and 2) the non-final background levels of chromium memorialized in the 2008 Amended Cleanup and Abatement Order (R6V-20008-0002A1). This CAO was not intended to provide a final solution for replacement drinking water in the Hinkley valley.

Recent Changes in the Regulation of Chromium 6

15. In 1986, the U.S. EPA classified hexavalent chromium as a known human carcinogen by the inhalation route of exposure. In 1989, the California Office of Environmental Health Hazard Assessment (OEHHA) set 0.002 µg/m3 (2 parts per trillion or 0.002 parts per billion) as the Chronic Inhalation Reference Exposure Level (REL) for Soluble Hexavalent Chromium compounds. The REL was based upon a human study of occupational exposure that recognized the carcinogenic risk of inhalation by persons exposed to non-aqueous hexavalent chromium used in industrial processes. The REL is a finalized regulatory limit. This REL is an enforceable standard, but is not directly correlated to risks from hexavalent chromium in water. It is important because it demonstrates established science that inhaled hexavalent chromium has adverse impacts on human health at extremely low levels.

16. In August 2009 the California Office of Environmental Health Hazard Assessment (OEHHA) released for public comment a draft Public Health Goal (PHG) for hexavalent chromium in domestic water. PHGs are based on a risk assessment that identifies a level of exposure at which no known or anticipated adverse effects on health will occur, with an adequate margin of safety (Cal. Health & Safety Code §116365). The PHG is used by the California Department of Health Services (DHS) to develop a final Maximum Contaminant Level (MCL) (California Health & Safety Code §116365(a)). Currently, the MCL for total chromium in drinking water is 50 ppb. There is no MCL set for hexavalent chromium.

In setting the PHG, OEHHA evaluated health risks from hexavalent chromium in domestic water based on a variety of typical household uses of tap water, including drinking, preparing foods and beverages, bathing or showering, flushing toilets, and other household uses resulting in potential dermal and inhalation exposures. Toxicity studies from routes of exposure were categorized according to ingestion, inhalation and dermal contact. Inhalation risks were determined based on studies of the impacts of inhaling hexavalent chromium-contaminated water vaporized in

the shower ("shower studies").Taking these risks into account, the initial PHG for hexavalent chromium was set at 0.06 µg/L. In December, 2010 OEHHA revised the PHG to 0.02 µg/L, based on public comment and response to peer review. The draft revised PHG is undergoing a second round of review and has not been finalized.

17. The 2010 draft PHG for hexavalent chromium considered some potential risks associated with inhalation of hexavalent chromium in domestic water, specifically in the "shower studies." However, the 2010 draft PHG did not include peer-reviewed scientific studies of the risks associated with the use of hexavalent chromium-contaminated water in other domestic appliances, including swamp coolers, hot water vaporizers, misters, or other household appliances that could create vaporized water through normal use. Normal household use of these appliances may present additional inhalation risks not accounted for in the 2010 draft PHG.

AUTHORITY – LEGAL REQUIREMENTS

18. California Water Code section 13304, subdivision (a) states in part:

> *Any person . . . who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged to waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up or abate the effects of the waste...*
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> *in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. A cleanup and abatement order issued by the state board or a regional board may require the provision of, or payment for, uninterrupted replacement water service, which may include wellhead treatment, to each owner.*

The Lahontan Water Board Basin Plan requires that "ground waters [with designated beneficial uses for drinking water] shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL)." Where OEHHA has established a PHG but DPH has not established an MCL, the State Water Resources Control Board (State Water Board) has determined that it is appropriate for a regional water board to require replacement water for wells affected at levels exceeding the PHG. (SWRCB Order WQ 2005-0007. p. 5.).[1]

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[1] SWRCB Order WQ 2005-0007 at 7. The State Water Board stated, "Where new water replacement orders are considered, ..., regional water boards should defer to OEHHA and DHS [now DPH] in determining safe drinking water levels. In this case, the Lahontan Water Board considers the revised draft PHG of 0.02 µg/L hexavalent chromium as an appropriate safe drinking water standard, since it was formulated by an agency with expertise in public health and will later be used by DPH in setting the MCL."

19. Based on this standard, the continued migration of hexavalent chromium is a discharge or deposit of waste into waters of the State (groundwater) or deposit of waste that probably will be discharged into the waters of the State. The Discharger is therefore subject to Water Code section 13304(a).

20. Pursuant to Water Code section 13304, subdivision (f):

> *Replacement water provided pursuant to subdivision (a) shall meet all applicable federal, state, and local drinking water standards, and shall have comparable quality to that pumped by the public water system or private well owner prior to the discharge of waste.*

21. Water Code section 13267 subdivision (b) states in part:

> *In conducting an investigation [of the quality of any waters of the state within its region] the regional board may require any person who has discharged waste within its region...[to] furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires.*

This Order requires modifications to workplans, monitoring, and reports. Workplans and technical reports have been required by previous Water Board Orders and are necessary to develop an accurate assessment of the plume of anthropogenic hexavalent chromium in the Hinkley upper aquifer.

22. State Water Resources Control Board Resolution 92-49 sets Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under 13304. Section (III)(G) requires regional boards to:

> *Ensure that dischargers are required to clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible...; any such alternative cleanup level shall:*
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> *1. Be consistent with maximum benefit to the people of the state;*
> *2. Not unreasonably affect present and anticipated beneficial use of such water; and*
> *3. Not result in water quality less than that prescribed in the Water Quality Control Plans and Policies adopted by the State and Regional Water Boards*

23. A final determination of background water quality has not been made. In accordance with Resolution 92-49, the Water Board must use the best available information on background water quality and order the Discharger to clean up and abate the effects of its discharges in a manner that promotes the best water quality that is reasonable considering all demands being made.

24. Section 13304 of the Water Code allows a regional board to hold persons accountable who "cause or permit" any waste discharged in a water of the State. The burden to remediate the impacts of waste falls on the party who is responsible for the discharge, even if their actions alone are not the only source of pollution (*City of Modesto Redevelopment Agency v. Superior Court*, 19 Cal.App.4th 28 (2004)). Likewise, in cases of hazardous waste discharges, the burden to remediate impacts of waste falls on the discharger even if they are not the sole cause of the costs (Browning-Ferris Industries of Illinois, Inc. v. Ter Maat, 195 F.3d 953, 49 Env't. Rep. Cas. (BNA) 1449, 30 Envtl. L. Rep. 20135 (7th Cir. 1999).. The Discharger is currently the only known source of anthropogenic chromium in the Hinkley upper aquifer. It is the Discharger's responsibility to remediate the affects of its discharge or to demonstrate that it is not responsible for the contamination or only a legally divisible portion of the contamination.

Findings

25. The State of California has not set a standard for safe levels of hexavalent chromium in drinking water. OEHHA is the state agency with expertise in making public health determinations, and has put significant amounts of study into developing the 2010 draft PHG for hexavalent chromium. The Water Board staff finds that the 2010 draft PHG for hexavalent chromium of 0.02 µg/L is an appropriate standard to rely on to protect the public from contaminated drinking water, despite the fact that it has not been formally promulgated. The Water Board finds it is appropriate to rely on this standard based on vast amount of sound scientific evidence and agency peer review supporting the draft 2010 PHG.

26. Based on the draft 2010 PHG, the Water Board has determined that hexavalent chromium in domestic wells above 0.02 µg/L poses an immediate health risk to Hinkley residents through continued household use of contaminated water, including drinking, preparing foods and beverages, bathing or showering, flushing toilets, and other household uses resulting in potential dermal and inhalation exposures.

27. The release from the Discharger's facility is the only known source of anthropogenic chromium in the groundwater of the upper Hinkley aquifer. All anthropogenic chromium in this area is considered waste as a result of the Discharger's activities.

28. The Discharger is required to abate the effects of its discharge in accordance with Water Code 13304 and Resolution 92-49. This includes providing uninterrupted replacement water service to all affected domestic wells. Water shall have comparable quality to the water pumped prior to the discharge of the waste.

29. The Discharger shall have the burden of providing replacement water to all persons using impacted wells in the affected area (see paragraphs below for definitions), unless the Discharger can prove that the hexavalent or total

chromium in the subject well is not a result of its discharge.

Impacted wells are defined as private or community domestic wells in the affected area containing hexavalent chromium in concentrations (measured at any time) that are above 3.1 µg/L hexavalent chromium/3.2 µg/L total chromium or that are statistically significantly greater (at a confidence level to be determined) than past hexavalent chromium concentrations in that same well.

The affected area is defined as all domestic wells located within one mile from the 3.1 µg/L hexavalent chromium/3.2 µg/L total chromium plume boundaries based upon monitoring well data drawn in the most current quarterly site-wide groundwater monitoring report submitted by the Discharger's consultants. Since the plume boundaries are dynamic each quarter, so is the affected area. Potential new impacted wells must be evaluated with each new quarterly plume map showing the boundaries of chromium in groundwater out to the maximum background levels for hexavalent and total chromium.

30. Pursuant to Water Code section 13304, the Water Board is entitled to, and may seek, reimbursement for all reasonable costs actually incurred by the Water Board to investigate unauthorized discharges of wastes or to oversee cleanup of such waste, abatement of the effect thereof, or other remedial action pursuant to this Order.

31. This Order amends Orders 1 and 2 in CAO R6V-2011-0005 for providing replacement water supply and submitting reports to the Water Board. All other Orders in CAO R6V-2011-0005 remain in effect unless later modified by the Water Board, the Water Board's Executive Officer, or his/her designated representative.

32. This Order requires workplans, monitoring, and reports pursuant to Water Code section 13267, subdivision (b). Workplans and technical reports required are essential to design a long-term water replacement plan and implementation schedule to verify compliance with this Order. Monitoring is required to verify that the Alternate Water Supply option implemented provides clean water to residences with wells containing hexavalent chromium at 0.02 µg/L or greater.

33. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provision of the California Environmental Quality Act (Public Resources Code section 21000 et seq.), pursuant to California Code of Regulations (CCR), title 14, section 15321, subdivision (a)(2). In pertinent part, (CCR), title 14, section 15061, subdivision (b)(3), known as the "common sense exemption," states that where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

In this case, the proposed activity may include measures such as providing interim bottled water service and developing a permanent replacement water supply through measures such as wellhead treatment or establishing deeper

domestic wells or installing above-ground tanks (to store hauled water). There is no possibility that the proposed activity will have a significant effect on the environment. However, if the Discharger plans to provide a community water system that could have the potential to have a significant effect on the environment, the Water Board will address the CEQA requirements of such proposed activities prior to requiring the implementation of those plans.

IT IS HEREBY ORDERED, pursuant to Water Code sections 13267 and 13304, the Discharger must:

1. **Interim replacement water supply**

   a. **Within 14 days from the date of this signed Order,** supply interim uninterrupted replacement water service (i.e., bottled water or equivalent), to all residences or businesses in the affected area containing hexavalent chromium above 0.02 µg/L[2]. At a minimum, the Discharger must provide enough replacement water for drinking, cooking, and swamp cooler needs. The Water Board may modify the affected area as additional information becomes available. The Water Board may rescind this requirement for residences or businesses where the Water Board agrees with the Discharger's supplied evidence that a well has not been impacted by the Discharger's waste.

   b. **Within 28 days from the date of this signed Order,** provide a letter report to the Water Board listing all residences and business that have been provided interim uninterrupted water service. The letter report must include addresses and well numbers. The letter must list the bottled water service being used and the water volume being provided. Provide documentation to show that interim water supply meets state primary and secondary drinking water standards and hexavalent chromium levels of 0.02 µg/L[3] (the 2010 draft PHG). If interim water supply is denied by a resident or business, provide proof or evidence of such refusal.

2. **Permanent replacement water supply**

   a. **By no later than 75 days from the date of this signed Order**, provide permanent replacement water supply for all indoor domestic uses to impacted wells in the affected area. Permanent replacement water must be similar to or better quality than the individual well quality prior to the Discharger's having affected the well. The Water Board's Executive Officer or his/her designated representative may extend or shorten this schedule with

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[2] For purposes of this standard, water samples must test above the reporting limit of 0.06 µg/L due to the limitation of laboratory analysis of low levels of chromium.

[3] For purposes of this standard, drinking water must test below the reporting limit of 0.06 µg/L due to the limitation of laboratory analysis of low levels of chromium.

adequate prior notice depending on the method recommended and justification given by the Discharger.

1) The Water Board will presume that an impacted well in the affected area has been contaminated as a result of the Discharger's pollution, unless the Water Board concurs with the Discharger's presentation of evidence that chromium in an individual well is not a result of its discharge.

2) Indoor domestic uses include drinking, cooking, bathing, washing, appliances including swamp coolers, domestic animals, and similar uses. The Discharger must include schematics showing the location of all relevant piping, structures, and properties required to implement this alternative. The schedule must list dates for completing tasks necessary to implement the permanent water supply. Permanent water supply must be able to meet state primary and secondary drinking water standards and hexavalent chromium levels of 0.02 µg/L[4] (the 2010 draft PHG) by the 75 day deadline.

b. **By no later than 90 days from the date of this signed Order**, provide a letter report to the Water Board listing all residences and business that have been provided permanent uninterrupted replacement water service. The letter report must include addresses and well numbers. State the method used to provide permanent uninterrupted replacement water service and provide evidence to prove that provided water meets state primary and secondary drinking water standards and contains hexavalent chromium in concentrations no greater than of 0.02 µg/L[4]. If storage tanks or transportation vehicles are used to store or transport water, provide evidence of state or local government certification. If permanent replacement water supply is denied by a resident or business, provide proof or evidence of such refusal.

3. Laboratory Analysis

All future water samples must be analyzed using the most recent testing methods. Testing for Total Chromium analysis must be done using US EPA Methods SW 6010B or 6020A to a reporting limit of 1 ppb. Testing for Hexavalent Chromium must be conducted in accordance with a modified version of EPA Method SW 218.6 with a 0.06 ppb reporting limit for hexavalent chromium.

The EPA has recently determined that detection limits of 0.02 ppb are possible using a modified version of Method SW 218.6. These modifications allow for

[4] For purposes of this standard, drinking water must test below the reporting limit of 0.06 µg/L due to the limitation of laboratory analysis of low levels of chromium.

improved low concentration measurement and are outlined in Dionex Corp. Application Update 144 "Determination of Hexavalent Chromium in Drinking Water by Ion Chromatography" found at www.dionex.com/en-us/webdocs/4242-AU144_V18.pdf. The EPA had determined that these modifications allow laboratories to attain a detection limit as low as 0.02 µg/L (ppb) and can support a reporting limit of 0.06 µg/L (ppb) with no additional burden. Information about the modified version of Method SW 218.6 is available at: http://water.epa.gov/drink/info/chromium/guidance.cfm.

The laboratory used must be certified by the California Environmental Laboratory Accreditation Program (ELAP) for hexavalent chromium analysis in drinking water. A list of certified labs is maintained by ELAP and is available at: (http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6.aspx)

Liability for Oversight Costs Incurred by Water Board: The Discharger shall be liable, pursuant to Water Code section 13304, to the Water Board for all reasonable costs incurred by the Water Board to investigate unauthorized discharges of waste, or to oversee clean up of such waste, abatement of the effects thereof, or other remedial action, pursuant to this Order. The Discharger shall reimburse the Water Board for all reasonable costs associated with site investigation, oversight, and cleanup. Failure to pay any invoice for the Water Board's investigation and oversight costs within the time stated in the invoice (or within thirty days after the date of invoice, if the invoice does not set forth a due date) shall be considered a violation of this Order. If the Property is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program.

Certifications for All Plans and Reports: All technical and monitoring plans and reports required in conjunction with this Order are required pursuant to Water Code section 13267 and shall include a statement by the Discharger, or an authorized representative of the Discharger, certifying (under penalty of perjury in conformance with the laws of the State of California) that the workplan and/or report is true, complete, and accurate. Hydrogeologic reports and plans shall be prepared or directly supervised by, and signed and stamped by a Professional Geologist or Professional Civil Engineer registered in California.

No Limitation of Water Board Authority: This Order in no way limits the authority of this Water Board to institute additional enforcement actions or to require additional investigation and cleanup of the site consistent with the Water Code. This Order may be revised by the Executive Officer as additional information becomes available.

Enforcement Options for Noncompliance with the Order: Failure to comply with the terms or conditions of this Cleanup and Abatement Order will result in additional enforcement action, which may include the imposition of administrative civil liability pursuant to Water Code sections 13350 and 13268 or referral to the Attorney General of the State of California for such legal action as he or she may deem appropriate.

Right to Petition: Any person aggrieved by this action of the Lahontan Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, of state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public notices/petitions/water quality or will be provided upon request.

Ordered by: _____ Dated: _____

HAROLD J. SINGER
EXECUTIVE OFFICER